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| |  |  | | --- | --- | | ***Swift-CARB*CNC TM** | **Aluminum Series "SC" - High Helix - 2 & 3 Flute** | | | | | | |
| **Chip Load Chart** | **Dia of End Mill** | **Materials: Aluminum or Plastics** | | **Materials: Copper** | |
| |  |  | | --- | --- | | **2 Flute** **SFM 450-1200** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **3 Flute** **SFM 450-1200** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **2 Flute** **SFM 200-600** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **3 Flute** **SFM 200-600** | | | **Speed RPM** | **Feed IPM** | |
| |  | | --- | | .0003 - .0008 | | .0004 - .0012 | | .0005 - .0015 | | .0010 - .0050 | | .0012 - .0055 | | .0020 - .0070 | | .0020 - .0080 | | .0025 - .0100 | | .0030 - .0150 | | .0020 - .0150 | | .0030 - .0160 | | .0030 - .0160 | | |  | | --- | | 1/8 | | 3/16 | | 1/4 | | 3/8 | | 7/16 | | 1/2 | | 9/16 | | 5/8 | | 3/4 | | 7/8 | | 1 | | 1-1/4 | | |  |  | | --- | --- | | MAX | 15 - 100 | | 9170 - MAX | 20 - 125 | | 6880 - MAX | 25 - 130 | | 4580- 12,000 | 25 - 140 | | 3930 - 10,500 | 30 - 150 | | 3440 - 9170 | 30 - 150 | | 3060 - 8150 | 30 - 160 | | 2750 - 7340 | 30 - 160 | | 2290 - 6110 | 30 - 165 | | 1970 - 5240 | 30 - 165 | | 1720 - 4590 | 30 - 170 | | 1375 - 3660 | 30 - 170 | | |  |  | | --- | --- | | MAX | 22 - 125 | | 9170 - MAX | 30 - 135 | | 6880 - MAX | 30 - 135 | | 4580- 12,000 | 35 - 150 | | 3930 - 10,500 | 35 - 150 | | 3440 - 9170 | 35 - 160 | | 3060 - 8150 | 40 - 180 | | 2750 - 7340 | 40 - 180 | | 2290 - 6110 | 40 - 185 | | 1970 - 5240 | 40 - 185 | | 1720 - 4590 | 40 - 195 | | 1375 - 3660 | 40 - 195 | | |  |  | | --- | --- | | 6110 - MAX | 8 - 50 | | 4080- 12,000 | 8 - 50 | | 3060 - 9170 | 10 - 50 | | 2040 - 6110 | 10 - 50 | | 1750 - 5250 | 15 - 60 | | 1530 - 4590 | 15 - 60 | | 1360 - 4080 | 15 - 65 | | 1220 - 3670 | 15 - 65 | | 1020 - 3060 | 18 - 75 | | 870- 2620 | 18 - 75 | | 770- 2290 | 18 - 75 | | 600 - 1830 | 18 - 75 | | |  |  | | --- | --- | | 6110 - MAX | 12 - 65 | | 4080- 12,000 | 12 - 65 | | 3060 - 9170 | 15 - 75 | | 2040 - 6110 | 15 - 75 | | 1750 - 5250 | 18 - 75 | | 1530 - 4590 | 18 - 75 | | 1360 - 4080 | 20 - 75 | | 1220 - 3670 | 20 - 75 | | 1020 - 3060 | 25 - 85 | | 870- 2620 | 25 - 85 | | 770- 2290 | 25 - 95 | | 600 - 1830 | 25 - 90 | | |

The Speeds and Feeds recommended on the aluminum charts are for starting points only.

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| **TERM** | **EQUATION** | **RESULT** |
| Revolution Speed | RPM = 3.82 x SFPM ÷ Dia. | = Required RPM |
| Surface Feet per Minute | SFPM = .262 x Dia. x RPM | = Surface Feet per Minute |
| Inches per Minute | IPM = RPM x Inches per Tooth x No. of Teeth | = Inches per Minute in Travel |
| Feed per Tooth Inches per Tooth | IPT = IPM ÷ RPM ÷ No. of Flutes | = Chip Load per Tooth Per Revolution |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | ***Swift-CARB*CNC TM** | **Aluminum Series "SC" - High Helix - 2 & 3 Flute** | | | | | | |
| **Chip Load Chart** | **Dia of End Mill** | **Materials: Aluminum or Plastics** | | **Materials: Copper** | |
| |  |  | | --- | --- | | **2 Flute** **SFM 450-1200** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **3 Flute** **SFM 450-1200** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **2 Flute** **SFM 200-600** | | | **Speed RPM** | **Feed IPM** | | |  |  | | --- | --- | | **3 Flute** **SFM 200-600** | | | **Speed RPM** | **Feed IPM** | |
| |  | | --- | | .0003 - .0008 | | .0004 - .0012 | | .0005 - .0015 | | .0010 - .0050 | | .0012 - .0055 | | .0020 - .0070 | | .0020 - .0080 | | .0025 - .0100 | | .0030 - .0150 | | .0020 - .0150 | | .0030 - .0160 | | .0030 - .0160 | | |  | | --- | | 1/8 | | 3/16 | | 1/4 | | 3/8 | | 7/16 | | 1/2 | | 9/16 | | 5/8 | | 3/4 | | 7/8 | | 1 | | 1-1/4 | | |  |  | | --- | --- | | MAX | 15 - 100 | | 9170 - MAX | 20 - 125 | | 6880 - MAX | 25 - 130 | | 4580- 12,000 | 25 - 140 | | 3930 - 10,500 | 30 - 150 | | 3440 - 9170 | 30 - 150 | | 3060 - 8150 | 30 - 160 | | 2750 - 7340 | 30 - 160 | | 2290 - 6110 | 30 - 165 | | 1970 - 5240 | 30 - 165 | | 1720 - 4590 | 30 - 170 | | 1375 - 3660 | 30 - 170 | | |  |  | | --- | --- | | MAX | 22 - 125 | | 9170 - MAX | 30 - 135 | | 6880 - MAX | 30 - 135 | | 4580- 12,000 | 35 - 150 | | 3930 - 10,500 | 35 - 150 | | 3440 - 9170 | 35 - 160 | | 3060 - 8150 | 40 - 180 | | 2750 - 7340 | 40 - 180 | | 2290 - 6110 | 40 - 185 | | 1970 - 5240 | 40 - 185 | | 1720 - 4590 | 40 - 195 | | 1375 - 3660 | 40 - 195 | | |  |  | | --- | --- | | 6110 - MAX | 8 - 50 | | 4080- 12,000 | 8 - 50 | | 3060 - 9170 | 10 - 50 | | 2040 - 6110 | 10 - 50 | | 1750 - 5250 | 15 - 60 | | 1530 - 4590 | 15 - 60 | | 1360 - 4080 | 15 - 65 | | 1220 - 3670 | 15 - 65 | | 1020 - 3060 | 18 - 75 | | 870- 2620 | 18 - 75 | | 770- 2290 | 18 - 75 | | 600 - 1830 | 18 - 75 | | |  |  | | --- | --- | | 6110 - MAX | 12 - 65 | | 4080- 12,000 | 12 - 65 | | 3060 - 9170 | 15 - 75 | | 2040 - 6110 | 15 - 75 | | 1750 - 5250 | 18 - 75 | | 1530 - 4590 | 18 - 75 | | 1360 - 4080 | 20 - 75 | | 1220 - 3670 | 20 - 75 | | 1020 - 3060 | 25 - 85 | | 870- 2620 | 25 - 85 | | 770- 2290 | 25 - 95 | | 600 - 1830 | 25 - 90 | |